

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHOJI MASUNARI and EIJI SHIMOCHI

Appeal No. 2000-0915
Application No. 09/064,083

ON BRIEF

Before ABRAMS, McQUADE, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 9, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to "a vehicle power supply system, and is applicable to the prevention of a vehicle fire which is caused by the power supply damage which may occur at the time of vehicle collision" (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Balban	3,980,318	Sep. 14, 1976
Kanazawa et al. (Kanazawa)	JP 6-321027 ¹	Nov. 22, 1994

Claims 1 to 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kanazawa in view of Balban.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted

¹ In determining the teachings of Kanazawa, we will rely on the translation provided by the USPTO. A copy of the translation is attached for the appellants' convenience.

rejection, we make reference to the final rejection (Paper No. 7, mailed February 26, 1999) and the answer (Paper No. 13, mailed September 7, 1999) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper No. 12, filed August 24, 1999) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness² with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1 to 9 under 35 U.S.C. § 103. Our reasoning for this determination follows.

² In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

The two independent claims on appeal read as follows:

1. A vehicle power supply system comprising:
 - a collision detecting member for detecting a collision of the vehicle;
 - a power line supplying electric power from a power source portion to a plurality of loads;
 - a fuse connected to the power line so that the fuse is fused when over-current flows therein; and
 - an over-current generating member for causing the over-current to flow in the fuse to fuse the fuse when the collision detecting member detects the collision of the vehicle.

8. A method to interrupt supplying electric power for a vehicle comprising the steps of
 - detecting a collision of the vehicle by a collision detecting member;
 - generating a collision detecting signal by the collision detecting member when the collision is detected;
 - shorting a switch circuit connected to a fuse by the collision detecting signal;
 - causing the over-current to flow in the fuse when the switch circuit is shorted;
 - fusing the fuse by the over-current.

Kanazawa discloses a power breaker device that maintains the vehicle safety by shutting the electric current sent from a battery when a problem occurs to a power system. The Figure 1 embodiment of Kanazawa's invention includes a battery 1; a fuse-link 2; power cable 3 leading to load devices; current detector part 4; silicon control rectifier 5; vehicle

monitoring control system 6; section status monitoring part 7; total current computation part 8; and control part 9. The Figure 1 embodiment of Kanazawa's invention operates as follows: the control part 9 compares the electric current value detected by the current detector part 4 with the electric current value computed by the total current computation part 8 and outputs a control voltage to the silicon control rectifier 5 when a power problem is detected. When a control voltage is impressed on the silicon control rectifier 5, the silicon control rectifier 5 becomes conductive, letting a high current be transmitted to the fuse-link 2 causing the fuse-link 2 to melt and thus stopping the supplying of power to each load device to thereby assure vehicle safety.

Balban's invention relates to a vehicle safety system and more particularly relates to a fused multiple stage inflation system for passive passenger restraints. The safety system of Balban includes deceleration sensors 59 and 62 which are initially open and remain so during normal operation of the

vehicle. Upon collision causing a preselected first level deceleration magnitude, the low level deceleration sensor 62 closes causing current to flow from power supply unit 11 through line 28, sensor 62, fuse 61 and line 40 to electro-explosive devices 33A and 33B. The electro-explosive devices 33A and 33B then fire and rapidly apply pressurized gas through lines 51A and 51B to confinement C initiating inflation thereof to restrain an adjacent occupant of the vehicle against injurious contact with surrounding portions of the vehicle toward which he is being impelled during the vehicle deceleration. However, when an electro-explosive device explodes, wire or powder fragments released by the explosion may cause a short, or substantial short, across the terminals of the electro-explosive device and hence across the power supply unit 11. Thereupon, the current through the series connected fuse 61 rapidly increases, causing it to open circuit and thereby removing the short from across the power source. Opening of the fuse occurs very quickly, normally in a few milliseconds, following the firing and shorting of the series connected electro-explosive device. This effect is of particular importance where the vehicle

battery 13 is disabled in the collision. In such event, opening of the fuse 61 prevents the shorted, fired electro-explosive device from draining a redundant power supply 20 sufficiently to prevent same from thereafter firing additional electro-explosive devices. Should the deceleration level continue to increase at least to the threshold of the deceleration sensing device 59, the latter closes, applying current from the power output line 28 through line 41 to a further electro-explosive device 34 causing same to detonate and flow gas through line 52 to confinement C for further protecting the corresponding vehicle occupant against the increased deceleration.

After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Based on our analysis and review of Kanazawa and claim 1, it is our opinion that the differences are: (1) a collision detecting member for detecting a collision of the vehicle; and

(2) the over-current generating member for causing the over-current to flow in the fuse to fuse the fuse occurs when the collision detecting member detects the collision of the vehicle. Based on our analysis and review of Kanazawa and claim 8, it is our opinion that the differences are: (1) detecting a collision of the vehicle by a collision detecting member; (2) generating a collision detecting signal by the collision detecting member when the collision is detected; and (3) shorting a switch circuit connected to a fuse by the collision detecting signal.

With regard to these differences, the examiner determined (final rejection, pp. 2-3) that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Kanazawa "with teachings of Balban, because the use of acceleration sensor activates the power supply short circuiting safety means due to an accident, wherein the safety means of [Kanazawa] can be use[d] to prevent short circuit fires (Balban; column 7, lines 8-15)."

The appellants argue (brief, pp. 8-15) that the applied prior art does not suggest the claimed subject matter. We agree.

Obviousness is tested by "what the combined teachings of the references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). And "teachings of references can be combined only if there is some suggestion or incentive to do so." Id. Here, it is our determination that the prior art contains none. In fact, the advantages of utilizing a collision detecting member to cause a fuse to blow to interrupt a vehicle power supply are not appreciated by the prior art applied by the examiner.

Instead, it appears to us that the examiner relied on hindsight in reaching his obviousness determination. However, our reviewing court has said, "To imbue one of ordinary skill

in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W. L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It is essential that "the decisionmaker forget what he or she has been taught . . . about the claimed invention and cast the mind back to the time the invention was made . . . to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." Id. Since the claimed subject matter as a whole is not taught or suggested by the applied prior art, we will not sustain the 35 U.S.C. § 103 rejection of independent claims 1 and 8, and of dependent claims 2 to 7 and 9.

CONCLUSION

To summarize, the decision of the examiner to reject
claims 1 to 9 under 35 U.S.C. § 103 is reversed.

REVERSED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN P. McQUADE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JEFFREY V. NASE)	
Administrative Patent Judge)	

Appeal No. 2000-0915
Application No. 09/064,083

Page 12

MORGAN LEWIS & BOCKIUS
1800 M STREET NW
WASHINGTON, DC 20036-5869

Appeal No. 2000-0915
Application No. 09/064,083

Page 13

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